BIOMETRIKA

A JOURNAL FOR THE STATISTICAL STUDY OF BIOLOGICAL PROBLEMS

FOUNDED BY

W. F. R. WELDON, FRANCIS GALTON AND KARL PEARSON

EDITED BY

KARL PEARSON

ASSISTED BY

EGON SHARPE PEARSON

VOLUME XXIV

1932

ISSUED BY THE BIOMETRIC LABORATORY
UNIVERSITY COLLEGE, LONDON
AND PRINTED AT THE
UNIVERSITY PRESS, CAMBRIDGE

PRINTED IN GREAT BRITAIN

Science
Faxon

CONTENTS OF VOLUME XXIV

Memoirs

		PAGE
I.	Hereditary Entropion and Hereditary Changes in the Skin of the Eyelids. By C. H. USHER. With fourteen figures in the text, one folding pedigree and four plates	1
II.	The Geometric Properties of Microscopic Configurations. I. General Aspects of Projectometry. By WILLIAM R. THOMPSON . .	21
III.	The Geometric Properties of Microscopic Configurations. II. Incidence and Volume of Islands of Langerhans in the Pancreas of a Monkey. By WILLIAM R. THOMPSON, RAYMOND HUSSEY and others. With one figure in the text	27
IV.	A Bessel Function Distribution. By A. T MCKAY. With one diagram in the text	39
V.	On the Normality or Want of Normality in the Frequency Distributions of Cranial Measurements. By E. M. ELDERTON and T. L. WOO. With three diagrams in the text	45
VI.	The Sampling Distribution of the Third Moment Coefficient—an Experiment. By JOSEPH PEPPER. With three figures in the text	55
VII.	Further Contributions to the Sampling Problem. By N. ST GEORGESCU	65
VIII.	A Preliminary Classification of Asiatic Races based on Cranial Measurements. By T. L. WOO and G. M. MORANT. With one map, two diagrams in text and two folding sheets of tables .	108
IX.	A Study of the Crania in the Vaulted Ambulatory of St Leonard's Church, Hythe. By BRENDA N. STOESSIGER and G. M. MORANT. With one map, one plan of Hythe, and six contours in text. Six tissue contours in pocket, two folding sheets of measurements and seven plates	135
X.	On the Mean Character and Variance of a Ranked Individual, and on the Mean and Variance of the Intervals between Ranked Individuals. By KARL PEARSON, with the assistance of MARGARET V. PEARSON. Part II. The Case of Certain Skew Curves. With three diagrams and eleven figures in the text	203

PAGE

XI. Further Applications in Statistics of the $T_m(x)$ Bessel Function. By KARL PEARSON, S. A. STOUFFER, and F. N. DAVID. With three figures in the text 293

XII. Experimental Discussion of the (χ^2, P) Test for Goodness of Fit. By KARL PEARSON 351

XIII. On the Distribution of the Correlation Coefficient in Small Samples. By PAUL R. RIDER. With six figures in the text 382

XIV. The Percentage Limits for the Distribution of Range in Samples from a Normal Population. By EGON S. PEARSON. With one figure in the text 404

XV. The Converse of Spearman's Two-factor Theorem. By BURTON H. CAMP 418

XVI. The Distribution of the Index in a Normal Bivariate Population. By E C. FIELLER. With two figures in the text 428

XVII. A Note on the Distribution of the Correlation Ratio. By JOHN WISHART 441

XVIII. On the Probability that Two Independent Distributions of Frequency are really Samples from the Same Parent Population. By KARL PEARSON 457

XIX. Certain Generalizations in the Analysis of Variance. By S. S. WILKS 471

Miscellanea

(i) A Comparison of the Accuracy of Two Types of Quadrature Formulae. By E. S. MARTIN 280

(ii) A Simple Non-Normal Correlation Surface. By H. L. RIETZ . 288

(iii) Note on Professor Rietz's Problem. EDITORIAL 290

(iv) Note on a Memoir by A. E. R. Church, *Biometrika*, Vol. XVIII. By A. E. R. CHURCH 292

(v) On a Method of Proceeding from partial Cell Frequencies to Ordinates and to total Cell Frequencies in the case of a bivariate Frequency Surface. By JACQUES CHAPELIN . . 495

(vi) On the Betas of Quadrilateral Distributions. By OWEN L. DAVIES. With three figures in the text 498

List of Plates, etc.

Biometrika Portrait Series, No. IX. A. A. MARKOFF, 1856—1922 *Frontispiece*

(*α*) *C. H. Usher:* Hereditary Entropion and Hereditary Changes in the Skin of the Eyelids.

Folding Pedigree . . . . . *to face page* 10

Plates I—IV . . . . . „ „ 20

(*β*) *T. L. Woo and G. M. Morant:* A Preliminary Classification of Asiatic Races based on Cranial Measurements.

Folding Table of Coefficients of Racial Likeness between Oriental Races . . . . . „ „ 122

Folding Table of Coefficients of Racial Likeness between Northern Mongolian and Oriental Races . . . . . „ „ 126

(*γ*) *B. N. Stoessiger and G. M. Morant:* A Study of the Crania in the Vaulted Ambulatory of Saint Leonard's Church, Hythe.

Plate I. Engravings of the Interior of the Ambulatory Passage of Saint Leonard's Church, Hythe . „ „ 202

Plate II. Typical Hythe Skulls. *Norma lateralis* . . „ „ „

Plate III. „ „ „ *Norma facialis* . . „ „ „

Plate IV. „ „ „ *Norma verticalis* . . „ „ „

Plate V. Abnormal Hythe Skulls . . . . . „ „ „

Plate VI. Basal Anomalies of the Hythe Skulls . . . „ „ „

Plate VII. Anomalous Hythe Skulls . . . . . „ „ „

Appendix of Individual Measurements in three tables on two folding sheets . . . . . „ „ „

Six Cranial Contours on tissue in pocket at end of volume.